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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/424,272	11/18/1999	EUGEN PAVEL	21306	7762

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EXAMINER

PATEL, GAUTAM

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/424,272

Applicant(s)

PAVEL, EUGEN

Examiner

Gautam R. Patel

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

#4

DETAILED ACTION

1. Claims 1-3 are pending for the examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119(a)-(d), which papers have been placed of record in the file.

Content of Specification

3. The disclosure is objected for following reasons:
 - a. This application does not contain an Abstract of the Disclosure as required by 37 C.F.R. § 1.72(b). **An Abstract on a separate sheet is required.**
 - b. Applicant is reminded of the *proper content* of an Abstract of the Disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains.

If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure.

If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement.

In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof.

If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following: (1) if a machine or apparatus, its organization and operation; (2) if an article, its method of making; (3) if a chemical compound, its identity and use; (4) if a mixture, its ingredients; (5) if a process, the steps. Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the *proper language* and *format* of an Abstract of the Disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," *etc.*

In the present application abstract is missing.

Corrections are required.

c. The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. It is recommended that the title should reflect the gist of or the improvement of the present invention.

Corrections are required.

Claim Objections

4.

Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 depends on claim 1 and 2. Which is improper format, since claim 3 is now trying to combine claims 1 and 2.

Corrections are required.

NOTE: It is assume that typographical error was made and instead of "retrieval system as in claim 1 and 2"; it should have read "retrieval system as in claim 1 or 2". For examination purposes it was assumed that claim 3 depends on claim 1 and also claim 3 depends on claim 2.

Claim Rejections - 35 U.S.C. § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by Prasad et al., US. patent 5,912,257 (hereafter Prasad).

As to claim 1, Prasad discloses the invention as claimed [see Figs. 1-32, especially, 21 and 31-32] including A data storage system, a data retrieval system and fluorescent photosensitive glasses, comprising:

A data storage [fig. 31; col. 72, line 41 to col. 73, line 5] and retrieval system [fig. 32; col. 73, line 56 to col. 74, line 26] characterized in that the fluorescent photosensitive glasses are used as information recording medium [col. 41, lines 43-64; col. 88, lines 4-15 and fig. 21].

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Prasad as applied to claim 1 above, in view of Dejneka, US. patent 5,955,388 (hereafter Dejneka).

As to claim 2, Prasad discloses a data storage and retrieval system characterized in that the fluorescent photosensitive ceramics. Prasad does not specifically disclose that vitroceraamic [or a type of glass-ceramic] can also be used in his system.

However, the use of glass ceramics for data storage has been well known in the art as they offer economic and performance alternatives with substantial improvements.

Also Dejneka clearly discloses: that the fluorescent photosensitive vitroceraamics are good hosts for 3-D displays and memories, in other words vitroceraamics are used as information recording medium [col. 2, lines 15-54]. Both Prasad and Dejneka are interested in improving the material for storage, both indicates various materials for 3-dimensional memory and storage and both indicates fluorescent photosensitive glasses as good information recording mediums.

One of ordinary skill in the art at the time of invention would have realized that it would be advantageous to provide economic and performance enhancements by providing alternative storage material such as glass ceramics or variation of these glass ceramics. Therefore, it would have been obvious to have used the fluorescent photosensitive vitroceraamics in the system of Prasad as taught by Dejneka because one would be motivated to improve the cost and performance of the recording and reading system by using the fluorescent photosensitive vitroceraamics

8. As to claim 3; Prasad discloses:

1. A confocal microscope [fig. 31, unit 6] [col. 72, line 41 to col. 73, line 32];
2. A tunable laser having maximum 100fs light pulses [col. 41, line 65 to col. 42, line 16], used in confocal microscope for writing and reading by two-photon process [col. 72, line 41 to col. 73, line 32];
3. A vertical scanning system [fig. 31, unit 18 and 20] and a radial scanning system [fig. 31, unit 16] used for the movement of writing and excitation beams [col. 72, line 41 to col. 73, line 32];
4. A rotating optical memory [fig. 31, unit 2][col. 72, line 41 to col. 73, line 32];
5. An excitation laser [fig. 31, unit 10], with the beam perpendicular on the fluorescence beam provided with a vertical scanning system [col. 72, line 41 to col. 73, line 32] for reading the optical memory by one-photon process [col. 42, lines 17-30 and fig. 16].

NOTE: These kind of systems inherently reads with one photon because reading is done on one surface at a time and does not require two photon process for reading.

Other prior art cited

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2655

1. Plumat et al. (US. patent 3,984,591) Process for formatting a metallic oxide coating.
2. Plumat et al. (US. patent 4,129,434) Process for forming a metal oxide coating.
3. Pavel (US. patent 6,132,643) Fluorescent photosensitive vitroceraamics ..
 - a. Harter et al. (US. patent 6,020,591) Two-photo microscopy ...
4. Denk et al. (US. patent 5,034,613) Two-photon laser microscopy
5. Nova et al. (US. patent 5,874,214) Remotely programmable matrices ..

Contact information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.



Gautam R. Patel
Patent Examiner
Group Art Unit 2655

November 15, 2003